Serial No.: 10/757,159
Examiner: Laura C. Schell
Group Art Unit: 3767

IN THE CLAIMS:

1 -10 (Canceled).

11. (Previously Presented) A driving system for use with an injector system, the injector system comprising: a housing defining a lumen and having an output end and a driving system connection end, the lumen comprising a proximal portion and a distal portion and the inner diameter of the proximal portion being substantially larger than the inner diameter of the distal portion; a needle assembly coupled to the output end of the housing for coupling to a needle; and a mixing member extending through the lumen from the driving system connection end to at least the output end, the mixing member being rotatable within the lumen in both the proximal portion and the distal portion; and

the driving system comprises:

a drive mechanism;

an actuator coupled to the drive mechanism to actuate the drive mechanism; and a rotatable interfacing member coupled to the drive mechanism for coupling with the mixing member to rotate the mixing member when the interfacing member is driven by the drive mechanism, wherein the mixing member is rotatable in the needle assembly and the lumen.

12. (Original) The driving system of claim 11, wherein the drive mechanism comprises a motor.

13. (Original) The driving system of claim 12, wherein the motor is a high speed, low torque motor.

14. (Original) The driving system of claim 12, wherein the motor is coupled to an energy source.

15. (Original) The driving system of claim 14, wherein the energy source is a battery.

16. (Original) The driving system of claim 11, wherein the actuator comprises a switch.

17. (Previously presented) The driving system of claim 11, wherein the driving system is capable of coupling to an injector system, the injector system comprising a tubular member and a mixing member extending through the tubular member.

18. (Previously Presented) A coupling system for use with a tube of a syringe comprising a proximal portion and a distal portion and the inner diameter of the proximal portion being substantially larger than the inner diameter of the distal portion, wherein the coupling system comprises: a housing for coupling to the tube of the syringe; a drive mechanism disposed within the housing; a mixing member for coupling to the drive mechanism, the mixing member extending into the tube of the syringe and being rotatable within the tube of the syringe in both the proximal portion and the distal portion to mix and deliver an injectable from the tube of the syringe; and an actuator coupled to the drive mechanism to actuate the drive mechanism and thereby cause rotation of the mixing member.

19. (Original) The coupling system of claim 18, wherein the mixing member is coupled to the drive mechanism.

20. (Previously presented) The coupling system of claim 18, wherein the housing further comprises a mating portion, the mating portion being capable of mating with the tube of the syringe.

21. (Canceled)

22. (Previously presented) The coupling system of claim 20, wherein the tube of the syringe comprises an injectable material.

23. (Original) The coupling system of claim 18, wherein the housing comprises finger grips.

Serial No.: 10/757,159
Examiner: Laura C. Schell
Group Art Unit: 3767

24 – 25. (Canceled)

26. (Previously Presented) The driving system of claim 11, wherein the mixing member comprises a helical element.

27. (Previously Presented) The driving system of claim 26, wherein the helical element is an auger.

28. (Previously Presented) The coupling system of claim 18, wherein the mixing member comprises a helical element.

29. (Previously Presented) The coupling system of claim 28, wherein the mixing member comprises a helical element.

30. (Previously Presented) The coupling system of claim 22, wherein the injectable material comprises a shear-sensitive injectable material.

31. (Previously Presented) The driving system of claim 11, wherein the injector system further comprises an injectable material comprising a shear-sensitive injectable material.

32. (Previously Presented) The driving system of claim 31, wherein the shear-sensitive injectable material comprises a cross-linked material, a carrier, and a matrix material.

33. (Previously Presented) The driving system of claim 31, wherein the injectable material further comprises a bioactive molecule.

34. (Previously Presented) The driving system of claim 11, wherein the lumen further comprises a middle portion having an inner diameter substantially larger than the inner diameter of the proximal portion.

35. (Previously Presented) The driving system of claim 11, wherein the mixing member comprises a screw having a proximal end and a distal end, the screw being extendable and rotatable within both the proximal portion and the distal portion of the lumen.

36. (Previously Presented) The driving system of claim 35, wherein an outer diameter of the screw decreases from the proximal end to the distal end.

37. (Previously Presented) The driving system of claim 35, wherein a pitch of the screw decreases from the proximal end to the distal end.

38. (Previously Presented) The driving system of claim 35, wherein a radial thread height of the screw increases from the proximal end to the distal end.